

RECEIVED  
CENTRAL FAX CENTER

OCT 23 2006

In the claims:

1. (currently amended) A common power control signal data structure for carrying data communications ~~embedded on a carrier wave and transmitted~~ from a base station to a plurality of subscriber units in a code division multiple access wireless communication system, the common power control signal data structure causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the power control signal comprising:

a plurality of power control bits, each power control bit corresponding to a reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power; and

a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel.

2. (currently amended) The common power control signal data structure of claim 1, wherein a power control bit of the plurality of power control bits corresponding to a respective reverse link common channel is transmitted during a message capsule portion of the respective reverse link common channel.

3. (currently amended) The common power control signal data structure of claim 1, wherein an inhibit bit of the plurality of inhibit bits corresponding to a respective reverse link common channel is transmitted during an idle time of the respective reverse link common channel.

4. (currently amended) The common power control signal data structure of claim 1, wherein the plurality of reverse link common channels are offset from one another.

5. (currently amended) The common power control signal data structure of claim 1, wherein the reverse link common channel comprises a reverse common control channel.

6. (currently amended) A common power control signal data structure for carrying data communications ~~embodied on a carrier wave and transmitted~~ from a base station to a plurality of subscriber units in a code division multiple access wireless communication system, the common power control signal causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the power control signal comprising:

a first power control/inhibit bit stream that corresponds to a first reverse link common channel; and

a second power control/inhibit bit stream that corresponds to a second reverse link common channel, the second power control/inhibit bit stream offset in relation to the first power control/inhibit bit stream.

7. (currently amended) The common power control signal data structure of claim 6, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset.

8. (currently amended) The common power control signal data structure of claim 6, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by fixed offset and the starting bit position of the first and second streams is given by a pseudo-random value updated for each power control group.

9. (currently amended) The common power control signal data structure of claim 6, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset and the starting bit position of the first and second streams is given by a counter value updated for each power control group.

10. (currently amended) The common power control signal data structure of claim 6, further comprising:

a third power control/inhibit bit stream that corresponds to a third reverse link common channel; and

a fourth power control/inhibit bit stream that corresponds to a fourth reverse link common channel.

11. (currently amended) The common power control signal data structure of claim 10, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset;

the third power control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset; and

the fourth control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset.

12. (currently amended) The common power control signal data structure of claim 10, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and

the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by a fixed offset.

13. (currently amended) The common power control signal data structure of claim 10, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and

the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by another pseudo-random offset.

14. (currently amended) The common power control signal data structure of claim 10, wherein:

a starting bit position is pseudo-randomly selected from a plurality of available bit positions; and

the first, second, third and fourth power control/inhibit bit streams are pseudo-randomly positioned based upon the starting bit position.

15. (currently amended) A common power control and quick paging channel data structure for carrying data communications on ~~embedded on a forward link carrier wave of a~~ Walsh channel in a code division multiple access wireless communication system and ~~transmitted~~ from a base station to a plurality of subscriber units, the common power control and quick paging channel data structure ~~forward link channel~~ comprising:

a common power control signal data structure causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the common power control signal mapped to a first portion of the Walsh channel; and

a quick paging signal data structure that sends pages to the plurality of subscriber units, the quick paging signal mapped to a second portion of the Walsh channel.

16. (currently amended) The common power control and quick paging channel data structure of claim 15, wherein:

the common power control signal is mapped to an in phase portion of the Walsh channel;  
and

the quick paging signal is mapped to a quadrature portion of the Walsh channel.

17. (currently amended) The common power control and quick paging channel data structure of claim 15, wherein:

the common power control signal is mapped to a quadrature portion of the Walsh channel; and

the quick paging signal is mapped to an in phase portion of the Walsh channel.

18. (original) A base station that supports communications with a plurality of subscriber units in a CDMA wireless communication system, the base station comprising:

an antenna;

a radio frequency interface coupled to the antenna;

a spreader/despreader coupled to the radio frequency interface;

a coder/decoder coupled to the spreader/despreader;

processing circuitry coupled to the coder/decoder;

memory coupled to the processing circuitry;

a base station controller interface coupled to the processing circuitry; and

the base station supporting a power control channel comprising:

a plurality of power control bits, each power control bit corresponding to a reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power; and

a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel.

19. (previously presented) The base station of claim 18, wherein a power control bit of the plurality of power control bits are transmitted by the base station during a message capsule or preamble portion of a respective reverse link common channel.

20. (previously presented) The base station of claim 18, wherein an inhibit bit corresponding to a respective reverse link common channel is transmitted during an idle time of the respective reverse link common channel.

21. (original) A base station that supports communications with a plurality of subscriber units in a CDMA wireless communication system, the base station comprising:

- an antenna;
- a radio frequency interface coupled to the antenna;
- a spreader/despreader coupled to the radio frequency interface;
- a coder/decoder coupled to the spreader/despreader;
- processing circuitry coupled to the coder/decoder;
- memory coupled to the processing circuitry;
- a base station controller interface coupled to the processing circuitry; and
- the base station supporting a power control channel comprising:
  - a first power control/inhibit bit stream that corresponds to a first reverse link common channel; and
  - a second power control/inhibit bit stream that corresponds to a second reverse link common channel, the second power control/inhibit bit stream offset in relation to the first power control/inhibit bit stream.

22. (original) The base station of claim 21, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset.

23. (original) The base station of claim 21, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset.

24. (original) The base station of claim 21, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a varying offset that is based upon a counter value.

25. (original) The base station of claim 21, wherein the power control signal further comprises:

a third power control/inhibit bit stream that corresponds to a third reverse link common channel; and

a fourth power control/inhibit bit stream that corresponds to a fourth reverse link common channel.

26. (original) The base station of claim 25, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset;

the third power control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset; and

the fourth control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset.



27. (original) The base station of claim 25, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and

the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by a fixed offset.

28. (original) The base station of claim 25, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and

the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by another pseudo-random offset.

29. (original) The base station of claim 25, wherein:

a starting bit position is pseudo-randomly selected from a plurality of available bit positions; and

the first, second, third and fourth power control/inhibit bit streams are pseudo-randomly positioned based upon the starting bit position.

30. (previously presented) A base station that supports communications with a plurality of subscriber units in a CDMA wireless communication system, the base station comprising:

an antenna;

a radio frequency interface coupled to the antenna;

a spreader/despreader coupled to the radio frequency interface;

a coder/decoder coupled to the spreader/despreader;

processing circuitry coupled to the coder/decoder;

memory coupled to the processing circuitry;

a base station controller interface coupled to the processing circuitry; and

the base station supporting a common control channel comprising:

a common power control signal causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the common power control signal mapped to a first portion of a Walsh channel; and

a quick paging signal that sends pages to the plurality of subscriber units, the quick paging signal mapped to a second portion of the Walsh channel.

31. (original) The base station of claim 30, wherein:

the common power control signal is mapped to an in phase portion of the Walsh channel;

and

the quick paging signal is mapped to a quadrature portion of the Walsh channel.

32. (original) The base station of claim 30, wherein:

the common power control signal is mapped to a quadrature portion of the Walsh channel; and

the quick paging signal is mapped to an in phase portion of the Walsh channel.

33. (previously presented) A subscriber unit that supports communications with a base station in a CDMA wireless communication system, the subscriber unit comprising:

an antenna;

a radio frequency interface coupled to the antenna;

a spreader/despreader coupled to the radio frequency interface;

a coder/decoder coupled to the spreader/despreader;

processing circuitry coupled to the coder/decoder;

memory coupled to the processing circuitry;

a user interface coupled to the processing circuitry; and

the subscriber unit decoding and processing a power control signal to extract a power control bit and an inhibit bit corresponding to a common channel used by the subscriber unit, the power control signal comprises:

a plurality of power control bits, each power control bit corresponding to a respective reverse link common channel of a plurality of reverse link common channels and directing a respective subscriber unit transmitting on the respective reverse link common channel to adjust its reverse link transmission power; and

a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a respective reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the respective reverse link common

channel.

34. (original) A subscriber unit that supports communications with a base station in a CDMA wireless communication system, the subscriber unit comprising:

an antenna;

a radio frequency interface coupled to the antenna;

a spreader/despreader coupled to the radio frequency interface;

a coder/decoder coupled to the spreader/despreader;

processing circuitry coupled to the coder/decoder;

memory coupled to the processing circuitry;

a user interface coupled to the processing circuitry; and

the subscriber unit decoding and processing a power control signal to extract a first power control/inhibit bit stream that corresponds to a first reverse link common channel, the power control signal comprising:

a first power control/inhibit bit stream that corresponds to a first reverse link common channel; and

a second power control/inhibit bit stream that corresponds to a second reverse link common channel, the second power control/inhibit bit stream offset in relation to the first power control/inhibit bit stream.

35. (original) The subscriber unit of claim 34, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset.

36. (original) The subscriber unit of claim 34, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset.

37. (original) The subscriber unit of claim 34, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a varying offset that is based upon a counter value.

38. (original) The subscriber unit of claim 34, wherein the power control signal further comprises:

a third power control/inhibit bit stream that corresponds to a third reverse link common channel; and

a fourth power control/inhibit bit stream that corresponds to a fourth reverse link common channel.

39. (original) The subscriber unit of claim 38, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset;

the third power control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset; and

the fourth control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset.

40. (original) The subscriber unit of claim 38, wherein:  
the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and  
the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by a fixed offset.

41. (original) The subscriber unit of claim 38, wherein:  
the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and  
the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by another pseudo-random offset.

42. (original) The subscriber unit of claim 38, wherein:  
a starting bit position is pseudo-randomly selected from a plurality of available bit positions; and  
the first, second, third and fourth power control/inhibit bit streams are pseudo-randomly positioned based upon the starting bit position.

43. (original) A subscriber unit that supports communications with a base station in a CDMA wireless communication system, the subscriber unit comprising:

an antenna;

a radio frequency interface coupled to the antenna;

a spreader/despreader coupled to the radio frequency interface;

a coder/decoder coupled to the spreader/despreader;

processing circuitry coupled to the coder/decoder;

memory coupled to the processing circuitry;

a user interface coupled to the processing circuitry; and

the subscriber unit decoding and processing a power control channel comprising:

a common power control signal mapped to a first portion of a Walsh channel; and

a quick paging signal that is mapped to a second portion of the Walsh channel.

44. (original) The subscriber unit of claim 43, wherein:

the common power control signal is mapped to an in phase portion of the Walsh channel;

and

the quick paging signal is mapped to a quadrature portion of the Walsh channel.

45. (original) The subscriber unit of claim 43, wherein:

the common power control signal is mapped to a quadrature portion of the Walsh channel; and

the quick paging signal is mapped to an in phase portion of the Walsh channel.

46. (previously presented) A method for transmitting power control bits from a base station to a plurality of subscriber units in a code division multiple access wireless communication system, the common power control bits causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the method comprising:

determining a plurality of power control bits, each power control bit corresponding to a respective reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power;

determining a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a respective reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel;

assembling the plurality of power control bits and the plurality of inhibit bits into a common bit stream; and

transmitting the common bit stream to the plurality of subscriber units.

47. (original) The method of claim 46, wherein power control bits corresponding to a reverse link common channel are transmitted during a message capsule portion of the reverse link common channel.

48. (original) The method of claim 46, wherein an inhibit bit corresponding to a reverse link common channel is transmitted during an idle time of the reverse link common channel.



49. (original) A method for transmitting power control bits from a base station to a plurality of subscriber units in a code division multiple access wireless communication system, the common power control bits causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the method comprising:

determining a first power control/inhibit bit stream that corresponds to a first reverse link common channel;

determining a second power control/inhibit bit stream that corresponds to a second reverse link common channel;

combining the first power control/inhibit bit stream with the second power control/inhibit bit stream into a common bit stream such that the second power control/inhibit bit stream is offset in relation to the first power control/inhibit bit stream; and

transmitting the combined bit stream on a forward link channel.

50. (original) The method of claim 49, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset.

51. (original) The method of claim 49, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset.

52. (original) The method of claim 49, wherein the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a varying offset that is based upon a counter value.

53. (original) The method of claim 49, further comprising:

determining a third power control/inhibit bit stream that corresponds to a third reverse link common channel; and

determining a fourth power control/inhibit bit stream that corresponds to a fourth reverse link common channel.

54. (original) The method of claim 53, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a fixed offset;

the third power control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset; and

the fourth control/inhibit bit stream is offset from the first power control/inhibit bit by a fixed offset.

55. (original) The method of claim 53, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and

the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by a fixed offset.

56. (original) The method of claim 53, wherein:

the second power control/inhibit bit stream is offset from the first power control/inhibit bit stream by a pseudo-random offset; and

the fourth power control/inhibit bit stream is offset from the third power control/inhibit bit by another pseudo-random offset.

57. (original) The method of claim 53, wherein:

a starting bit position is pseudo-randomly selected from a plurality of available bit positions; and

the first, second, third and fourth power control/inhibit bit streams are pseudo-randomly positioned based upon the starting bit position.

58. (original) A method for transmitting a common power control signal and a quick paging signal from a base station to a plurality of subscriber units in a code division multiple access wireless communication system, the method comprising:

mapping the common power control signal to a first portion of a forward link Walsh channel; and

mapping the quick paging signal to a second portion of the Walsh channel.

59. (original) The method of claim 58, wherein:

the common power control signal is mapped to an in phase portion of the Walsh channel;

and

the quick paging signal is mapped to a quadrature portion of the Walsh channel.

60. (original) The method of claim 58, wherein:

the common power control signal is mapped to a quadrature portion of the Walsh

channel; and

the quick paging signal is mapped to an in phase portion of the Walsh channel.